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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,454	02/20/2004	Marcus Allen Mills		5637

7590 09/20/2005

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EXAMINER

JEFFERY, JOHN A

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/782,454	Applicant(s) MILLS, MARCUS ALLEN	
	Examiner John A. Jeffery	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/27/05 & 8/19/05.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1, 2 and 5 is/are rejected.
 7) ☒ Claim(s) 3 and 4 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 19 August 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Power of Attorney

The examiner acknowledges the submission of the Power of Attorney filed 8/16/05 appointing Werner H. Schroeder as attorney or agent to prosecute the instant application on behalf of applicant. The instrument has been approved and entered.

Listing of Claims

Although an amendment was filed on 8/19/05 in response to a Notice of Non-Compliant Amendment mailed 8/10/05, no updated claim listing is present in the record. The most recent claim listing available to the examiner is the "List of amended Claims 1-5 [sic]" filed 6/27/05. Accordingly, all references to the claims in this Office Action are to the claims listed in that paper.

For clarity of the record, applicant must submit a complete claim listing with proper status identifiers in accordance with 37 CFR 1.121. Applicant is reminded of the revised amendment practice under 37 CFR 1.121 effective July 30, 2003.

Title of Invention

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Applicant stated that the title proposed in the last office action would only be "partially accepted" since "the second heat converting device is not a 'source' but a

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receiving device.” See Page 1 of the Remarks filed 8/19/05. Nonetheless, this characterization is inconsistent with the last two sentences of the amended abstract expressly stating that (1) light is transferred to another light emitting source, and (2) light energy is transferred “to a new source of a light device.” (emphasis added.) In light of applicant’s arguments, the examiner presumes that the last two sentences of the abstract regarding transferring light to another light source are in error (i.e., “source” as used in those sentences should be “receiving device”).

Therefore, in view of applicant’s characterization, the following title is suggested: “Water Heating Device With Light Bulb Heat Source Whose Light is Transferred to Another Light Receiving Device.”

Abstract

The abstract of the disclosure is objected to because of the following informalities: In the last two sentences, applicant must change the term “source” to “receiving device” for clarity and consistency as noted above. Correction is required. See MPEP § 608.01(b).

Drawing Objections

The drawings are objected to because of the following informalities:

Fig. 1 and 2: The examiner acknowledges submission of corrected Figs. 1 and 2 with the amendment filed 8/19/05. However, applicant must label each drawing sheet

"Replacement Sheet" in the page header in accordance with 37 CFR 1.84(c). New replacement sheets must be provided to cure this defect.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1-5 are objected to because of the following informalities:

Claim 1: In line 3, both occurrences of "is" must be deleted for brevity.

Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim ends in a comma and is incomplete. Consequently, it is uncertain whether applicant intended for additional limitations to follow the comma or if the comma was intended to be a period. Therefore, the claim's scope is unclear. For examination purposes, the examiner presumes that applicant intended the comma in line 2 to be a period.

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 USC 102(b) as being anticipated by FR580613. FR580613 discloses a water heating device comprising light bulbs 8 and shield 3 surrounding the light bulbs. The heated shield in turn heats water flowing around the shield that enters the structure via inlet 5 and exits via outlet 7. See Figs. 1-3.

Claim Rejections - 35 U.S.C. § 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over FR580613 in view of Truhan (US 3,551,641). The claim differs from FR580613 in calling for the heat receiving device to be a coil. But coils containing liquids to be heated that surround heat-receiving shields are well known in the art. Truhan (US 3,551,641), for example, discloses an electric heater 25 surrounded by heat-receiving shield 20 that transfers heat to a liquid flowing in coiled conduit 12. See Figs. 1-3 and col. 2, lines 35-42. By providing a coiled conduit for the liquid to be heated, the liquid is forced to flow in a spiral path that constantly contacts the heated shield during travel. As a result, the liquid remains in direct, heat-conductive contact with the shield for a longer time as compared to a freely flowing liquid. Moreover, the conduit protects the liquid flowing therein from contamination. In view of Truhan (US 3,551,641), it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a coiled conduit for the liquid to be heated in FR580613 so that liquid is forced to flow in a spiral path that constantly contacts the heated shield during travel, thus

ensuring that the liquid remains in direct, heat-conductive contact with the shield for a longer time as compared to a freely flowing liquid. Moreover, providing a coiled conduit would protect the liquid flowing therein from contamination.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over FR580613 in view of JP7-98153. The claim differs from FR580613 in calling for a second heat converting system coupled in a series arrangement. But serially coupling multiple radiantly-heated fluid heaters together is well known in the art. JP7-98153, for example, discloses serially connecting a number of fluid heaters 2a together such that the fluid must flow through each respective housing prior to exiting the outlet. Each heater housing 2a contains lamps to heat the fluid flowing therein. See abstract and ¶ 0008 of the computer translation. Such an arrangement not only provides gradual, progressive heating of the fluid as it travels, but also enables individual electronic control of each heater. In view of JP7-98153, it would have been obvious to one of ordinary skill in the art at the time of the invention to serially couple an additional heat converting system in the previously described apparatus to not only gradually and progressively heat the fluid as it travels, but also individually control each heater.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Truhan (US 3,551,641) in view of DE3707486. Truhan (US 3,551,641) discloses an electric heater 25 surrounded by heat-receiving shield 20 that transfers heat to a liquid flowing in coiled conduit 12. See Figs. 1-3 and col. 2, lines 35-42. The claims differ

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from Truhan (US 3,551,641) in calling for the heat source to be a regular light bulb. But light bulb heat sources used to heat water flowing in coiled conduits that surround the heat sources is well known in the art. DE3707486, for example, discloses a water heating device comprising regular light bulbs 7 that heat water flowing in coiled copper pipe 5 surrounding the bulbs. See the figure and abstract. As noted in the abstract, using light bulbs as the heat source not only saves energy and decreases pollution, it also simplifies replacement by merely replacing the heat sources as required with conventional, off-the-shelf light bulbs. In view of DE3707486, it would have been obvious to one of ordinary skill in the art at the time of the invention to use regular light bulbs as the heat source in the previously described apparatus to not only save energy and decrease pollution, but also simplify replacement by merely replacing the heat sources as required with conventional, off-the-shelf light bulbs.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Truhan (US 3,551,641) in view of DE3707486 and further in view of JP7-98153. The claim differs from the previously cited prior art in calling for a second heat converting system coupled in a series arrangement. But serially coupling multiple radiantly-heated fluid heaters together is well known in the art. JP7-98153, for example, discloses serially connecting a number of fluid heaters 2a together such that the fluid must flow through each respective housing prior to exiting the outlet. Each heater housing 2a contains lamps to heat the fluid flowing therein. See abstract and ¶ 0008 of the computer translation. Such an arrangement not only provides gradual, progressive heating of the

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fluid as it travels, but also enables individual electronic control of each heater. In view of JP7-98153, it would have been obvious to one of ordinary skill in the art at the time of the invention to serially couple an additional heat converting system in the previously described apparatus to not only gradually and progressively heat the fluid as it travels, but also individually control each heater.

Allowable Subject Matter

Claims 3 and 4 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Final Rejection

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

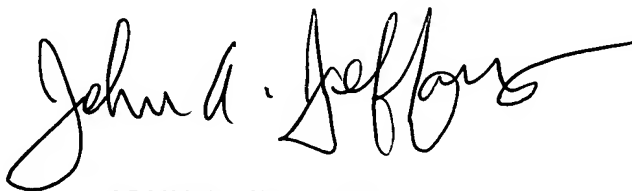
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Jeffery whose telephone number is (571) 272-4781. The examiner can normally be reached on Monday - Thursday from 7:00 AM to 4:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans, can be reached on (571) 272-4777. All faxes should be sent to the centralized fax number at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "John A. Jeffery". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

**JOHN A. JEFFERY
PRIMARY EXAMINER**

9/19/05